DOCUMENT RESUME

ED 361 514 CE 064 452

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TITLE Research Quality in Continuing Education: A Study of Citations Patterns. Research Paper in Continuing Education Number 3.
INSTITUTION Warwick Univ., Coventry (England). Dept. of Continuing Education.
REPORT NO ISBN-1-869836-91-X
PUB DATE 91
NOTE 30p.
AVAILABLE FROM Continuing Education Research Centre, University of Warwick, Coventry CV4 7AL, England, United Kingdom (2.95 British pounds).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Adult Education; *Citation Analysis; *Citations (References); *Continuing Education; *Educational Research; Foreign Countries; *Research Utilization
IDENTIFIERS *Great Britain; Research Quality

ABSTRACT

The citations contained in research published in two British scholarly periodicals in the field of continuing education for the years 1986-1990 were analyzed. The analysis had two primary objectives: (1) to evaluate the potential of citation analysis as a quantitative method of studying the quality of research output; and (2) to determine whether citation counts would help establish the extent to which British adult education researchers are creating a distinctive body of literature. A total of 2,353 references (601 from "Studies in the Education of Adults" and 1,752 from the "International Journal of Lifelong Education") were classified according to their main subject focus and according to whether they represented primary, secondary, or tertiary literature. The following were determined: the most frequently cited texts; the 20 most frequently cited authors; the pattern of self-citation among the top 20 authors; and the balance among primary, secondary, and tertiary literature. The study results were seen as reinforcing the widespread skepticism regarding the effectiveness of citation counts a measures of research quality. The citation analysis did, however, result in a "map" of the current state of scholarship and research in British continuing education and was deemed useful for such purposes. (Contains 15 references.) (MN)

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ED 361 514

UNIVERSITY OF WARWICK

Research Paper in Continuing Education Number 3

RESEARCH QUALITY IN CONTINUING EDUCATION:

A STUDY OF CITATIONS PATTERNS

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Citation counting has been widely discussed in Britain in recent years, but rarely in any detail. It has emerged onto the scholarly agenda because it is seen as a plausible and simple means of measuring academic performance. Jack Meadows has defined it recently as follows:

> Citation counting is part of bibliometrics and involves the quantitative study of the references appended to documents (usually articles in journals) (Meadows 1991).

This paper reports on an empirical study of two citations analyses, carried out on two British scholarly periodicals in the field of continuing education for the years 1986 - 1990. Our findings confirm the widespread scepticism surrounding proposals to use citation counts to measure quality; we think them more worthless for that purpose than we did when we began our inquiry. At the same time, citation counting did help us produce a "sketchmap" of the current state of scholarship and research in British continuing education, and it is in this latter respect that it may have a valuable if limited role. On the assumption that some for of citation counting is probably inevitable, given the present state of British higher education and its managers, we conclude with some brief recommendations for the two main scholarly bodies in British continuing education.

Introduction

Continuing education is, in Britain, far better established as a field of practice than as an area of study. As a field of study, continuing education developed in the twentieth century from fairly modest origins, and it remains very much an applied field of study, whose concepts are drawn from other parent

disciplines (sociology, economics, history, psychology, philosophy and politics); where knowledge is derived from the field; and where research and scholarship are largely treated as subordinate to practice (Jarvis 1990). Further, the numbers of British scholars involved in continuous and sustained research are relatively small.

As an area for research, then, continuing education is probably best regarded as a subset of wider fields, such as educational studies or management. Its institutional conditions of existence, though, are rather different. Unlike mainstream management or educational studies, which are taught and studied in universities, polytechnics and colleges but are at least a coherent domain of research, the study of continuing education is dispersed. Teaching and research into adult education is concentrated mainly in the universities; that into further education tends to be located in the polytechnics; nursing and management education can be found in both; there is little or no teaching and research into training and human resource development. Continuing education's split institutional identity sets it apart, then, from mainstream educational studies.

Within the universities, still at present the main source of published scholarship, continuing education has a long extra-mural history. It existed as a field of practice for some fifty years or more before it also became a field of teaching and research, and there is a strong predisposition to regard the former as the primary function. Historically, organisational and cultural factors both favoured a low status for research into CE; most people did not even regard themselves as adult education specialists at all. Where specialised CE Departments existed inside universities, lecturers have constructed for themselves an identity which is rooted partly in their practice (on the margins of the University) and partly in the discipline

which they teach to their adult classes (a varied clutch, including management, botany, archaeology and women's studies).

As a result, research into the education of adults has only been carried out by a minority within the Adult Education Departments. That minority has often felt itself embattled; its public vehicle, the Standing Conference on University Teaching and Research into the Education of Adults (SCUTREA), ploughed a lonely furrow for many years. Some CE researchers turned to research methodologies - participatory research, for example - which appeared congruent with the values and practice of CE more widely, but were not always recognised as research by scholars from more conventional disciplines.

In recent years much has changed. Old structures of University adult education have collapsed; as they have started to operate more within the University mainstream, then if only for reasons of survival and credibility, the remaining Adult Education Departments have to be seen to do research, and do it well. Short-term earmarked funding is available for CE research from the Universities Funding Council, on a competitive basis. Our entry into European networks, often through Community programmes such as ERASMUS, has alerted many of us to the relatively poor standing of British University research into the education of adults in the eyes of many of our French, German or Dutch colleagues. Research has, as a result, a new salience within most Adult Education Departments.

This has not been a conflict-free process. Competitive bidding to the UFC for funds has brought rivalries, and the selective outcomes have meant disappointment for many. The very idea of a mainstream Adult Education Department is offensive to many who were brought up in the Extra-Mural tradition, as is the idea of appraising the research performance of a lecturer who was hired in the 1960s to teach local history or the Victorian novel. It

is easy to see why the idea of measuring research quality - hotly contested as it is throughout the University system - has caused so much anxiety in continuing education, manifested in reactions to the University Grants Committee's last selectivity exercise as well as in the muddle in which the UGC's CE panel got itself.

In these circumstances, should we try and measure the quality of research in CE, and if so how? Measurement is, after all, usually deemed a necessary precondition for accounting, judging and improving performance. It is also of increasing importance in the distribution of resources: research selectivity review ratings are already used to allocate recurrent grant, and UFC has indicated that they will be of growing significance in the future (with universities being asked whether they wish to be told how the research part of their grant divides up as between cost centres). Measuring quality is also a useful exercise in its own right, enabling us to compare the relative performance of institutions, and to identify what kinds of institutional support and academic planning best promote good research (Baumert & Roeder 1990).

No single means of measuring research quality has yet won widespread acceptance. In the past, the UGC judged research performance by a process of peer review. Inevitably, this process attracted criticism: a member of the AUT executive, for example, suggested that the UGC panels were "affected by personal prejudices", and were London-centred so that

> The outcome suggests a 'miles from Park Crescent' inverse factor somewhere in the rating formula (Emanual 1989: 8).

Subjective judgements are always likely to attract criticism, precisely because they are subjective; the question remains whether more objective and quantitative measures are any more accurate than the old-boyism that characterised the UGC.

Citations analyses represent the most commonly used attempt to give a quantitative value to research quality. This paper reports on an analysis of citations in articles in the two most prestigious British journals in the field, **Studies in the Education of Adults** and the **International Journal of Lifelong Education, between** 1986 and 1990. Our intention was twofold. We wished (1) to evaluate the potential of citations analysis - the main quantitative method for studying the quality of research output - and (2) to see whether citation counts would help establish the extent to which British adult education researchers are creating a distinctive body of knowledge.

Citation Counts

The citation count is not yet widely used in British academic circles, and may therefore be unfamiliar to many researchers. In the United States, however, citation counting in its contemporary form has gone on at least since the publication of the **Science Citation Index** in 1961. Originally developed for the purposes of information retrieval and document tracing, citation counting has also been used bibliometrically to develop rankings of journals, publishers and authors in various fields; this information in turn can be used to identify patterns of intellectual influence within disciplines, map the existence of "invisible colleges", and trace the diffusion of new concepts, discoveries or empirical findings (Smith 1981).

Citation counting is also sometimes used in the US as a quantitative indicator of quality in judging published research output. For example, some American universities use it to determine lecturer and researcher productivity when reaching decisions on tenure, promotions and salary merit raises.

Although this is probably not its main use, it is certainly what most British academics think of when they hear of it. The assertion made by defenders of this practice is that the citation count offers an accurate proxy measure for quality because it represents the impact of a publication on the work of informed peers. This rests on a number of assumptions, all of which have been challenged on bibliometric grounds.

Most straightforwardly, it has been alleged that citation counting is empirically flawed. Weaknesses include the poor reliability of some authors' citations in the literature being surveyed: one study of two prestigious psychology periodicals showed that 11% and 14% respectively of all citations were in error; other studies have shown that, once a source is cited wrongly, the error will be repeated by other authors (Sweetland 1989: 295 - 300). This is essentially a practical problem (Sweetland recommends improved training in research methods); more complex is the assumption made of authorial intentions. As Michael and Barbara MacRoberts demonstrate, authors frequently do not cite their main influences; nor are the most frequent citations necessarily positive ones (MacRoberts and MacRoberts 1989). Epistemological differentiation between different domains of knowledge, or straightforward socio-cultural bias, may also play a part - in the form, for example, of an apparent gender effect in citation patterns (with male scientists being more likely to be cited than women, providing "proof" to the naive that women produce less significant research (Cole 1979: 64)).

Such weaknesses are well-known in the US. In Britain, the Universities Funding Council concluded on the basis of a pilot study in science and engineering that

> there was little to be gained by the use of citation counts and, more broadly, that bibliometric analysis was as yet a very poor substitute for peer review (UFC 1989:

14).

However, UFC was also aware that the process of "peer review" is extremely subjective and impressionistic, and is open to criticism on the grounds that the criteria used in determining relative degrees of "excellence" were not clear to participants. Similarly, a report on peer review to the Advisory Board for the Research Councils concluded that although

> using such indicators in micro-level assessment is not generally accepted as either reliable or useful . . . where such information is easily available, it should be provided for peer review bodies, which can then assess its value for their specific purposes (Working Group on Peer Review 1991: 5 - 6).

In short, the jury is still unconvinced that citation counts can help measure individual performance; but is prepared to countenance their use in judging the value of research proposals. Assessment of performance, preferably through quantitative indices, is then increasingly accepted in policy circles as an essential component of "accountability". Citations analyses have their supporters, and from time to time they will be proposed as providing an alternative, and reliable, measure of quality.

Continuing Education and Citations Analysis

Continuing education as a field of study does not lend itself to quantitative measurement, particularly on the basis of citations counting. First, it is poorly represented within the **Index**. Second, all educational research tends to be driven by normative and humanistic assumptions; qualitative methodologies are generally preferred over quantitative, which are seen as

"reductive" and "positivistic". In continuing education, the scene is complicated by the characteristic structure of the University Department of Continuing Education, which might be expected to be - and in fact is - the main basis for CE research.

Structurally, the decisive fact is that the nature of the field is driven by practice. University CE Departments until the 1980s generally consisted of scholar-practitioners who were employed primarily as animators or as teachers in other disciplines (history, drama, life sciences, etc). With a very small number of exceptions (Leeds, Nottingham, Manchester) their research activities rarely focussed upon building a theoretical knowledge base in the field of adult education. In fact, some lecturers experienced the absence of a pretentious/precious "research culture" as one of the most positive and joyously emancipatory aspects of the job.

This is partly a practical problem, which of course to an extent applies to similar fields such as social work, business studies, some forms of engineering, and educational studies more widely. But the argument also has an epistemological dimension, perhaps uniquely so in CE. Teachers in any applied subject could argue that if knowledge is designed to be useful to practitioners and policy-makers, then surely it makes more sense to measure its impact amongst these rather than upon fellow-researchers. In CE, though, and particularly in adult education, the 1970s witnessed the flowering of alternative, critical and populist concepts of research that were congruent with the libertarian educational practices associated with the writings of Paolo Freire. The most significant of these - participatory research - was explicitly anti-scholarly, anti-academic and a-theoretical, seeing the "expertise" of the University as part of the problem which popular educational movements sought to overcome (Hall 1975: 25 - 8). From this

point of view, measuring the quality of academic research is a completely pointless activity.

For CE Departments, then, the very nature of scholarly research is itself a contested issue. Developments since the early 1980s have done much to change the context in which research is undertaken. Internal developments favour the growth of a "research culture" within CE Departments: positively, the practice of CE has moved to a more central and less marginal position within the University; negatively, what Harold Wiltshire called "the Great Tradition" of liberal adult education has largely lost ground. Earmarked funding from the UFC, the recognition that European colleagues have sometimes developed significant scholarly contributions, and increased government pressure for selective funding according to performance have all raised the salience of research performance within University CE Departments. Yet for most CE researchers, quantitative measurement of research quality through citation counting is still seen as a foreign import, at best problematic, at worst actively damaging and reductive, which threatens the distinctive status of adult education as a combination of field of practice and field of study.

Epistemological reflection is, though, largely beside the point. From the existing sources, it is impossible to carry out a credible analysis of citations in continuing education. The primary source for citations counting in educational studies is the **Social Science Citations Index**, published annually by the US-based Institute for Scientific Information. **SSCI** is compiled by scanning yearly the citations of over 1,400 journals; of these, there is a total of 87 journals in the category of Education and Educational Research (and 20 more in the Special Education category). Of these, six deal with higher education, one with educational gerontology, and only one with the education of adults (the American **Adult Education Quarterly**).

In other words, continuing education as a field of study is seriously under-represented in the **Index** (and vocational education in particular is missing entirely). No reliable judgement could conceivably be formed of the merits of British scholarship using the **SSCI** as it now stands.

In itself, again, this is a practical problem. It could easily be overcome by adding a few appropriate journals to the **Index.** We have therefore attempted to replicate, in the British context, research carried out during the 1970s on the American journal **Adult Education** (Boshier and Pickard: 1979). We examined every citation made by authors of all substantive articles (not book reviews) published in what we believe are two leading British scholarly periodicals (the **International Journal of Lifelong Education (IJLE)** and **Studies in the Education of Adults (Studies))** in the five year period between 1986 and 1990. Both are refereed journals, edited by respected scholars; al**though IJLE** has the more prestigious editorial board by conventional standards, board members are in both cases identified by their University; **Studies** has the sponsorship of SCUTREA as well as of the National Institute of Adult Continuing Education. In other words, these are precisely the kinds of journals that might be scanned for the **Social Science Citations Index.**

Our intention was to:

1. identify those writers and works cited most frequently;
2. study the relative influence of "primary", "secondary" and "tertiary" literature on authors; and
3. compare findings across the two journals.

Subsequently, we hoped to identify some of the broad trends and prospects in the field.

Approach

Every reference cited by authors of all articles was listed on index cards. This gave a total of 2,353 references, each of which was classified according to its main subject focus. It was then allocated to one of three main categories: primary, secondary or tertiary literature. The guidelines used in categorising references were taken and amended from Boshier and Pickard:

(a) Primary literature = concepts, processes and data clearly identified with adult education. It is usually published in adult education books, journals or monographs; it is produced by people for whom adult education is their primary professional concern. It could include further education, vocational training and higher education - even schools in some circumstances - but only in so far as the reference deals with their work with adult learners.

(b) Secondary literature = concepts, processes and data identified with educational studies, but not with the education of adults strictly defined. It is usually published in education books, journals or monographs; it is produced by people for whom other sectors of education (schools, vocational training, higher education) are their primary professional concern.

(c) Tertiary literature = concepts, processes and data not primarily identified with education at all but with some other field of study. It is not usually published in educational journals or books, but is cited by the author because it deals with or supplies concepts, processes or contextual data which act as points of reference.

This classification was intended to provide a somewhat more refined analysis than that of Boshier and Pickard, whose analysis of citations in the American journal **Adult Education** used only two categories (primary adult education literature and other literature) (Boshier and Pickard 1979). We wanted to

know whether the wider field of educational studies has made any impact upon scholarship in continuing education, and so we included the intervening category. In the vast majority of cases, there was no difficulty in assigning a reference to the appropriate category. In some cases, where there was a degree of ambiguity, the reference was assigned to the category that appeared most appropriate after discussion.

As a result of the exercise, we analysed a total of 2,353 references cited. Far more of these came from **IJLE** than from **Studies**: 1,752 for the former, as opposed to 601 for the latter. We did not weight for this discrepancy. Rather, we have presented the data for the two journals separately in our tables.

Findings

Our work was designed to (a) test the likely impact of citation counting in continuing education; and (b) see what the exercise told us about the nature of knowledge in the field. We provided four main quantitative assessments of the total of citations. We have identified:

(a) the most frequently cited texts, using a simple aggregate count of references (Table One);
(b) the twenty most frequently cited authors, using a "full publication equivalent" which allocates one point for a single-authored text and half a point per author for reference to a jointly-authored text (Table Two);
(c) the pattern of self-citation among the top twenty; and
(d) a break down of all references showing the balance between primary, secondary and tertiary literature (Table Three).

We have not weighted as between books, edited collections or

articles (a weighting scheme is proposed in Furnham 1990). Nor, in aggregating the total counts, have we weighted for the differential citation patterns of the two journals; however, we rapidly found that the total number of references in **Studies** was far smaller than that in the **International Journal**, and readers may wish to bear this in mind.

Paolo Freire and Malcolm Knowles were the most frequently-cited authors, followed by Roger Boshier, Jack Mezirow, Stephen Brookfield and John McIlroy. Of these six authors, three are north Americans, one a Latin American, one a New Zealander, and one - McIlroy - British. North American domination is less marked in the bottom than in the top half of Table Two: seven out of the top ten are North American scholars, but only two of the following ten. Of the three mainland Europeans among the twentyfive most frequently cited authors, only one (Ettore Gelpi) is still alive; the other two - Karl Marx and Antonio Gramsci - are what you might call scriptural authors.

We found a marked gender imbalance. Among the twenty most cited authors, eighteen are men and two are women (Patricia Cross, an American, and Jane Thompson, the only British woman writer to feature in the top twenty). This casts doubt on the view that citations counting is less biassed against women than peer review; it is probable that the old-boy networks which operate strongly throughout British higher education are as likely to be reflected in citation patterns as in other qualitative judgements.

Self-citation is marked among at least five of the twenty most frequently cited writers. Self-citation accounted for all the references to Bagnall and Nordhaug, well above half of the count for McIlroy and Usher, and just over half for Boshier. Of these four, only Boshier would still have featured in the top twenty had self-citation been excluded from the count. Neither

of the two women authors were present as a result of self-citation.

Most of the frequently-cited texts are primary adult education literature. They also tend to be books. Freire's **The Pedagogy of the Oppressed**, first published in English in 1970, was the most frequently cited reference in both journals. In **Studies** it was followed by a work on the history of ideas (Kuhn's **Structure of Scientific Revolutions**), a book on action research (Carr and Kemmis' **Becoming Critical**), and R. W. K. Paterson's **Values, Education and the Adult.** In the **International Journal**, Freire was followed by the Faure report (**Learning to Be**), a reflective report on field work (Tom Lovett's **Adult Education, Community Development and the Working Class**), Knowles' **The Modern Practice of Adult Education**, and Patricia Cross' **Adults as Learners.** All of these oft-cited works are books rather than articles; only one (Kuhn, though Kerr and Kemmis might be considered as spanning the boundaries of educational studies) is not primarily concerned with the education of adults.

Research rarely appears among the most frequently cited works. Carr and Kemmis' **Becoming Critical** is a methodological textbook; it is about how to do action research, rather than presenting the results of some inquiry. Accordingly, our findings suggest that citation counting is not likely to prove a reliable means of measuring the quality of published research in the field of continuing education. This was as we had anticipated. What we had not realised, though, was the sheer extent to which citation is an unreliable proxy for quality.

Much of the work cited had no connection with current research into continuing education. The most frequently cited text - Freire's **Pedagogy of the Oppressed** - is inspirational so far as practice is concerned, but is only marginally concerned with research. Several of the authors are long deceased: Karl Marx,

for example, was one of the most frequently cited writers in our survey. Other frequently-cited works - e.g. Kuhn's **The Structure of Scientific Revolutions** - come from quite separate fields of study from continuing education. Table Three makes clear the general dominance in both the journals of concepts, data and processes drawn from what we defined as Secondary and Tertiary Literature. It also suggests that the number of citations per issue is rising steadily; and that the role of tertiary literature is growing. This trend is particularly marked for **Studies**, which acquired a new editor during our period, an actively publishing CE historian whose stated intention was to raise the journal's academic standing.

The main type of theoretical tertiary literature cited was political (with Marx leading the field, and Gramsci some way behind). Works of general social or economic theory were rarely cited; the works of Juergen Habermas, for example, were cited a total of five times (twice in **Studies**, three times in **IJLE**); interestingly, most authors citing Habermas come, like the Canadian Michael Welton, from overseas; this was not enough to bring him into any of our Tables. This pattern seems to reflect a generational culture: if they acknowledged any macro-theoretical influences at all, most British CE scholars during the late 1980s were more likely to cite the works of Marx and the more humanistic of his followers (Gramsci in particular) which had influenced them in the 1960s and 1970s than any contributor to contemporary social theory. But this should not be overstated. References to tertiary literature, although numerous in aggregate, tended to be dispersed among many authors, reflecting the multidisciplinary nature of CE as a field of practice as well as of study.

Primary references tended to concentrate more heavily around single authors. This is not to say though that a coherent theoretical debate is emerging among British CE scholars.

Rather, the most frequently cited texts tend to be prescriptive. Apart from Freire (10 citations in the **International Journal**, four in **Studies**), frequently-cited texts included the 1972 UNESCO report, **Learning to Be**; two books by Malcolm Knowles; and Patricia Cross' **Adults as Learners: increasing participation and facilitating learning.** Work directly involving research as such was rarely cited; Kerr and Kemmis is exceptional, but was as we have said cited largely because of its methodological significance; it acts as a "cultural signpost". In the **International Journal**, Tough's study of independent learning projects, Kelly's historical account of British adult education and the now rather dated participation study by Johnstone and Rivera received the highest number of citations for research-based studies (five each).

What we did not find are high levels of citations for the contemporary research of individuals. If self-citation is excluded, the only British author in the top ten is Ken Lawson, a philosopher; the next is Peter Jarvis. Neither is a current researcher, nor are they cited for empirical research. Nor is it possible to use our citation count to judge the quality of work emerging from the leading British CE Departments: Leeds, which we would ourselves judge the most productive and influential of British CE Departments during the 1980s, simply does not register as a source of quality research. The fact is that empirical research is not cited nearly as often as texts which are prescriptive, which summarise the state of scholarship in a convenient and compact manner, or which provide a source for a seminal but much-disputed "concept" like andragogy.

Attempts to measure quality through citations counting will, then, be entirely unsuccessful for the field of continuing education. Scholars will persistently challenge the findings of

any exercise which is based on the assumption that frequent citation is a measure of excellence; far from having any legitimacy, the exercise would be regarded as largely meaningless. Yet this is not entirely the case; although unreliable as an indicator of quality, citations analysis does reveal important patterns of influence and provides elements of a map of the field of study as it currently exists.

Defining the Research Territory

The findings of this exercise suggest a number of disturbing conclusions about the nature of British CE research. In particular, they indicate that the study of continuing education is still in a formative and under-developed stage; there is little if any sustained dialogue and debate among continuing education scholars; there are no widely shared conceptual frameworks of analysis, and those that exist are largely derived from systems of thought whose engagement with the field of adult education is rarely systematic. North American literature has a quite disproportionate influence; although there is some interest in and connection with European research, it has yet to bear fruit.

Sustained dialogue amongst scholars is commonly seen as the means whereby a discipline or field of study is formed (Elliott 1990). It fosters the development of a common discourse of analysis; it provides a terrain where alternative conceptions and explanations are advanced, clarified, tested and interrogated; and it allows interested parties to define the problem-fields for further study. A grasp of these debates is commonly used to induct younger scholars, and presumably it also serves a continuing career development function for

individuals. It is clear from our analysis of citation patterns that no such sustained dialogue is currently detectable among British students of continuing education - at least, not on any scale.

Evidence of a sustained engagement with one or more clearly defined problem-fields is absent from our study. Quite the reverse: for example, there is little cross-citation between John McIlroy and Roger Fieldhouse, currently the two leading historians of workers' education in Britain. There are signs that some common problem-fields are emerging: participation research is one such area; high citation counts for Brookfield and Tough may suggest that self-directed learning is an emergent shared preoccupation for some scholars; there is also a debate of sorts over the concept of andragogy. There is nothing to parallel the "standard of living debate" among historians, "the question of class" among sociologists, or "the unhappy marriage of marxism and feminism" debate between feminists some years ago. There is very little sign of a textual conversation; what we see is a group of people apparently bent on speaking past one another.

This problem is compounded by an evident discontinuity of authors. As in the USA, much writing in continuing education seems to be "single-shot" publishing: that is, the author writes one or perhaps two articles, then vanishes. This is common enough in practice-driven fields, where much of the writing is by practitioners who undertake a brief period of study - often towards a higher degree - then return to the field. Sadly, this practice is probably about to enter a period of decline; partly for generational reasons (there is little turnover among CE practitioners) and partly for fiscal ones (particularly the demise of "pooling" arrangements, whereby year-long secondments were funded by central rather than local means), sustained pieces of practitioner inquiry are likely to

become rarer. As a result of this development, and the new salience of research output within the University CE community, we suggest that publications such as **Studies** and **IJLE** will come increasingly to resemble conventional academic journals, whose function is largely that of providing space for debate among University CE scholars (and, in case it needs stating, thereby serving individual and institutional advantages).

What kinds of research might arise from the growing "conversational community" in CE? It is likely that the largely normative approach will continue, with most scholars assuming that the education of adults is something which should always be encouraged, and that research should help meet this goal. It is likely steadily to lose the humanistic values which fostered support for the idea of participatory research in the 1970s; generational changes, and the growing importance of continued vocational education within Universities, present a substantial challenge to the humanistic ethos of University CE. Partly but not entirely for linguistic reasons, North American models may continue to exert an undue methodological and topical influence: for example, participation research has made limited impact in the UK, in contrast to the USA, but it is probable that it will move to a more central place. North American scholars have for two decades studied the patterns of participation by adult learners and tried to establish their motivation for doing so, partly under pressure from the field. As British continuing education becomes more market-oriented, it is possible to predict that the American research will attract even greater interest. Johnstone and Rivera's **Volunteers for Learning** (first published in 1965) was cited five times in the **International Journal**, where Roger Boshier was also the most frequently-cited individual (his 1971 article on motivation was prominently referenced).

As European networking spreads among CE researchers, so a further and probably separate trend may emerge which is oriented more towards theory and concept-building than practice. However, our citation search has not thrown up any evidence that this is happening yet. American intellectual hegemony is, on our evidence, secure. Citation counting is, though, an intrinsically historical exercise. It analyses the footnotes to articles published some years ago, and written maybe two or three years before that. In other words, our evidence tells us more about the early than the late 1980s.

Conclusion

We are concerned in this paper to identify the implications and explore the possible uses of citation counts in continuing education in Britian. We have emphasised the limitations to citation counting as a means of measuring the quality of research and scholarship in continuing education. Yet we are still able to draw a number of conclusions concerning the nature of CE as a field of scholarship in Britain: namely that it is often conducted by isolated individuals rather than conversational communities, it is unduly influenced by a small number of largely North American authors, and that its most significant scriptural figures tend to reflect the normative and humanistic ideals of contemporary British scholars in the field. Although there is a growing reliance on what we call the "primary literature" of CE, this does not provide evidence of "invisible colleges" of scholars pursuing common debates and themes. CE research is then weak in a number of key respects, and is therefore vulnerable to invasion from scholars working in other fields of study (industrial relations, organisation

studies, sociology of race and ethnicity, even educational studies).

Our use of citations analysis has been, then, to examine the state of the art. To say that we doubt its value as a means of judging research quality is something of an understatement! Yet we do take it seriously, believing that the importance of citation counts is almost certain to grow, for several reasons. Current developments are rapidly enhancing the ease with which bibliometric studies are carried out. Information technology and information science have greatly increased the amount of bibliographic detail that can be electronically stored; information from the Institute of Scientific Information **Indexes** is now available on-line in all British Universities, through the BIDS consortium. This development affects one of the main objections to citation counting, namely that, as the Advisory Board's report noted,

> collecting information on outputs can be difficult and costly, and the current techniques which attempt to analyse quality are expensive (Working Group on Peer Review 1991: 12).

As the process becomes easier and cheaper, so the practical obstacles to citation counts will diminish.

Citation counts are, we have found, not an effective and accurate way of measuring the quality of research, nor even of scholarship, in continuing education. It would though be sensible for SCUTREA and the Universities Council on Adult and Continuing Education (UCACE) to recognise that they may well be introduced, at least in some British Universities, at some time in the future. Pressures for greater accountability, and for more focussed linking between performance and resourcing (corporate and individual), are so intense that even daft solutions sometimes seem attractive. This being so, it makes sense for our representative bodies, UCACE and SCUTREA, to take

citation counting more seriously, and maybe even to consider how the existing bibliometric system needs to be changed in order to limit the damage.

We therefore suggest that UCACE and SCUTREA:

1. use their relationship with their sister organisations in Canada and the United States to identify the ways in which citation counts are currently used and what the effects have been;
2. consider their own policy on the use of citation counts as proxy measures of quality in scholarship and research in continuing education;
3. raise the question of citation counts with other scholarly bodies in the social sciences (and especially the British Educational Research Association); and
4. approach the ISI with a request that a small number of appropriate journals be included in the **Social Science Citations Index** (not least so that BIDS becomes a more worthwhile resource for CE scholars).

We see this as little more than a basic damage limitation exercise, though a necessary one. What is more important is that it be linked to longer term measures to raise the quality of continuing education research as a whole in Britain.

TABLE ONE: MOST FREQUENTLY CITED PUBLICATIONS

Numbers of citations (FPEs) in the two journals:

	Studies	IJLL	Total
Freire, Pedagogy of the Oppressed	4	10	14
Paterson, Values, Education and the Adult	3	7	10
Cross, Adults as Learners	2	6	8
Faure, Learning to Be	0	8	8
Knowles, The Modern Practice of Adult Education	1	6	7
Kuhn, Structure of Scientific Revolutions	4	3	7
Lovett, Adult Education, Community Development and the Working Class	1	6	7
Griffin, Curriculum Theory...	2	5	7
Knowles, The Adult Learner	2	4	6
Carr & Kemmis, Becoming Critical... Through Action Research	3	3	6
Houle, Enquiring Mind	2	4	6
Johnstone & Rivera, Volunteers for Learning	1	5	6
Kelly, History of Adult Education	1	5	6
Mezirow, Critical Theory of Adult Learning	0	5	5

Mezirow, Critical Theory of Self-Directed Learning	1	4	5
Berger & Luckman Social Construction of Reality	2	3	5
Brookfield, Understanding and Facilitating Adult Learning	1	4	5
Jarvis, Adult and Continuing Education Theory and Practice	1	4	5
Lawson, Philosophical Concepts and Theories in Adult Education	1	4	5
Tough, The Adult's Learning Projects	1	4	5

Note: to be included in this Table, a publication had to score at least five FPEs in total, with a minimum threshold of either two FPEs in **Studies** or four FPEs in **IJLE**, the differential reflecting the more frequent publication scheduling of the latter.

TABLE TWO: MOST FREQUENTLY CITED AUTHORS

Numbers of citations (FPEs) in the two journals:

	Studies	**IJLE**	Total
Freire, P	5	23	28
Knowles, M	5	23	28
Boshier, R	1	23	24
Mezirow, J	1	21.5	22.5
Brookfield, S	2	18.5	20.5
McIlroy, J	9.5	11	20.5
Tough, A	2	17	19
Lawson, K	2	16	18
Dewey, J	3	14	17
Cross, P	2	12	14
Bagnall, R	4	10	14
Nordhaug, O	0	13	13
Peters, RS	1	12	13
Marx, K	7.5	5	12.5
Jarvis, P	4	8	12
Houle, CO	4	6	10
Erikson, EH	2	8	10
Thompson, J	3	6	9
Griffin, C	4	5	9
Raybould, S	3	6	9
Paterson, RWK	3	6	9
Gelpi, E	1	8	9

* We excluded 19 references to Raymond Williams' work, since 14 were in an article marking his death.

TABLE THREE: REFERENCES TO PRIMARY, SECONDARY AND TERTIARY LITERATURE, 1986 & 1990

	Primary	Secondary	Tertiary	TOTAL
			(a) **Studies**, vols 18 and 22	
1986	46	24	8	78
1990	62	41	63	166
			(b) **IJLE**, vols 5 and 9	
1986	131	96	134	361
1990	153	167	161	481

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ISBN 1-869836 -91-X

£2.95